

ABSTRACT OF THE DISCLOSURE

A method for deriving and implementing one or more motion profiles is provided. In the method, at least one time constraint between a first motor controlled system in an automated device and a second motor controlled system in the automated device are identified. Known parameters of the first motor controlled system and the second motor controlled system are identified and supplied. A first motion profile for the first motor controlled system is created. A second motion profile for the second motor controlled system is created. The identified at least one time constraint is applied to the first and second motion profiles to constrain the first and second motion profiles to one another. The first and second motion profiles are solved to complete a solution having solution information to prepare for use by said first and second motor controlled systems. The solution information is post-processed for use by the first and second motor controlled systems.